

CLAIMS

What is claimed is:

1. Drive axle assemble comprising:
 - an enveloping worm pinion in meshing engagement with a face type gear;
 - a housing with bearing support;
 - 10 a traction unit adapted for connection to said face gear, having two members for connection to axle shafts.
2. Drive axle assemble as recited in claim 1 wherein said enveloping worm pinion having threads with less than one revolution.
3. Drive axle assemble as recited in claim 1 wherein said traction unit is gear
15 differential having side gears for connection to axle shafts in mesh with intermediate gears rotatably located on a carrier, and said carrier attached to said face type gear.
4. Drive axle assemble as recited in claim 1 wherein said traction unit has
20 two sets of clutches, each clutch has first member and second member attached to said face type gear.
5. Drive axle assemble comprising:
 - a first enveloping worm pinion in meshing engagement with a first face type gear;
 - a first housing with bearing support;
 - 25 a first traction unit adapted for connection to said first face gear, have two members for connection to axle shafts;
 - an additional drive axle assemble with pinion linked to said enveloping worm.
6. Drive axle assemble as recited in claim 5 wherein said additional drive axle assemble comprising:
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 - a second enveloping worm pinion in meshing engagement with a second face type gear;
 - a second housing with bearing support;
 - a second traction unit adapted for connection to said second face gear, having two members for connection to axle shafts.

- 5 7. Drive axle assemble as recited in claim 5 wherein said enveloping worm
pinion has threads with less than one revolution.
8. Drive axle assemble as recited in claim 5 wherein said additional drive
axle assemble comprising:
a bevel type pinion in meshing engagement with a ring gear;
10 an additional housing for said additional pinion with bearing support;
an additional traction unit adapted for connection to said additional face
type gear, having two members for connection to axle shafts.
9. Drive axle assemble as recited in claim 5 wherein said traction unit is gear
differential with side gears for connection to axle shafts in mesh with
15 intermediate gears rotatably located on a carrier, and said carrier attached
to said face type gear.
10. Drive axle assemble as recited in claim 5 wherein said traction unit has
two sets of clutches, each clutch has first member for connection to axle
shafts and second member attached to said face type gear.
- 20 11. A worm differential for drive axle assemble, comprising:
a differential case;
a carrier;
two said face gears opposing each other, providing traction torque;
intermediate enveloping worms in mesh with said face gears rotatably located
25 on said carrier.
12. A worm differential for drive axle assemble as recited in claim 11
wherein said enveloping worms have threads with less than one
revolution.
13. A worm differential for drive axle assemble as recited in claim 12
30 wherein said enveloping worms have threads with less than 90 degree of
revolution.